

Robson, Howard

NATIONAL MOBILITY CENTRE
CONFERENCE, BIRMINGHAM 6-
7TH MAY 1976.

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NATIONAL MOBILITY CENTRE CONFERENCE, BIRMINGHAM 6-7th May 1976,

- reported by Howard Robson.

Delegates, some 120 of them, were welcomed to the ninth NMC Annual Conference by Mr Walter Thornton, OBE, Chairman of the Advisory Committee. Mr Thornton described briefly his original meeting with the Conference's principal speaker, AFB Executive Director, Mr L E Apple, when he went for long cane training to Hines in the USA, in 1965. Since then great strides have been made in the field of mobility and one of the most active in this, with particular reference to low vision travel, has been, and still is, Gene Apple, "And we are delighted to have him, together with his wife Marianne, at NMC Conference so that they might share their knowledge with us".

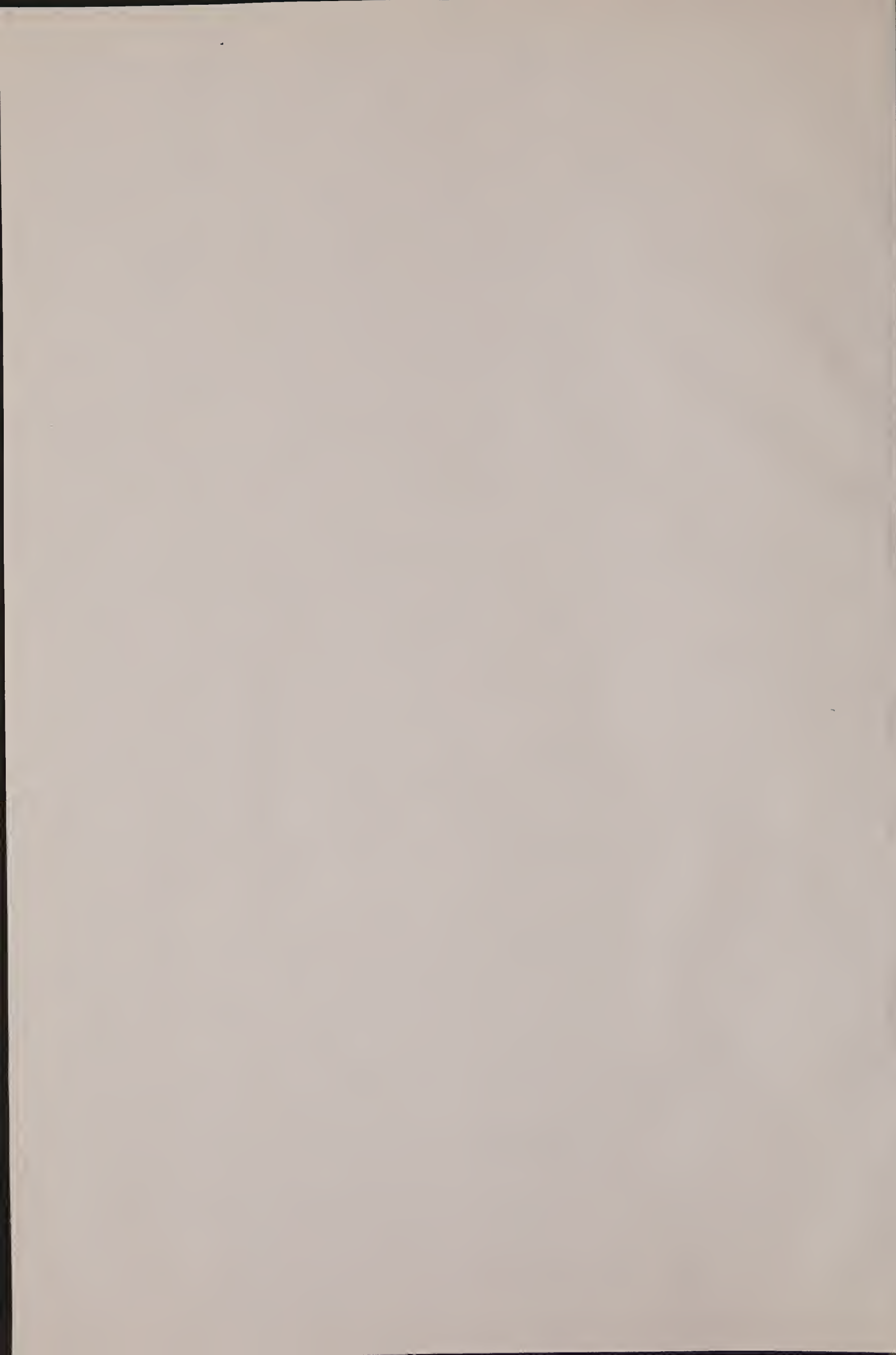
Before introducing the guest speaker, Conference Chairman and NMC Principal, Mr Peter Ryan, in his introduction, gave a resume of the year's activity at the Mobility Centre, which continued to flourish with places in demand not only from home, but also from overseas, including Continental Europe, South Africa, Nigeria and Yugoslavia. Mr Ryan made mention of the NMC's new role in providing an advisory service for local authorities without a mobility instructor. The emphasis remaining, of course, on the need for such authorities to employ a mobility officer as a specialist in the Social Services Department. Mr Ryan also welcomed the publication of a new book, in four languages, dealing with orientation and mobility, and written jointly by Mr Walter Thornton and Dr John Armstrong.

Mr Apple opened his talk with a brief history of developments in low vision training, and of the need for a structured training for those with residual sight. He started his own work in 1960, at the time when mobility programmes were first being established, and when there were only a small number of devotees. However, when you believe in something that really works (and drew as an example Walter Thornton, who himself was very much responsible for the introduction and development of long cane techniques to the British Isles) expansion and success usually follow, to the extent that, for instance, Western Michigan University alone now qualifies over 100 mobility instructors a year.

Low vision has many varied forms, and in the early days there was no real allowance made for these categories, all being lumped together as 'blind'. We had to ask ourselves: is low vision a separate disability? Are there enough characteristics to distinguish it, for instance, in terms of self-concept? The speaker answered in the affirmative, and since this was the case, had decided to treat it as a disability in itself with two main features: ambiguity (therefore there is no clear definition of low vision) and polarization (the client may decide he can see and therefore decides he doesn't need specific training, or he may decide he is blind, and thus needs training in blind techniques. In short, whether client or instructor, we do tend to draw an arbitrary line and decide one way or the other).

Mr Apple moved on to the subject of learning; and the Mobility Instructor, it was stressed, should provide situations and conditions in which his client would face not failure, but success. In this way learning would take place at an optimal level. Learning equals behavioural change; these changes can take place at random or through instruction. The visual stimulation that a person receives can also be at random (which in a fully sighted person it usually is), or based on systematic training, which latter is the basis of a low vision programme. Any person has low vision where he is not functioning as he should; and such a person will learn and adapt and change his behaviour more beneficially through the training of those

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pp. 2-7.*



who have some knowledge of his visual acuity. Thus the training can be geared to suit that particular person, instead of, as in the past, getting over the problem by having the client use a blindfold, and so lumping all clients together as one. Based on visual field when dealing with low vision, clinical observation reveals six main types:

- (1) Peripheral field loss (e.g. glaucoma; retinitis pigmentosa) in which central vision may remain and it is 50 - 50 as to whether or not a mobility aid is used.
- (2) Central field loss in which good night vision may be maintained, and the toleration level of light is limited.
- (3) Scattered blind spots resulting in a mixed bag of characteristics.
- (4) Wedge-shaped blind spots affecting both central and peripheral vision.
- (5) Quarter (or more) field loss as a result, perhaps, of brain injury, with good vision in remaining areas, but limited interpretation of visual experiences.
- (6) Schistozal loss of vision in the instance of a removed cataract being replaced by a circular glass which affects and distorts vision, sometimes to an alarming degree.

With regard to the low vision client and his adjustment there are a number of do's and don'ts. For example, try as we might, it is not possible to train a person for the onset of blindness. A blindfold can be used, but it is neither cost effective or humanly effective, because the problem is not approached, and therefore cannot be reproduced, when blindness occurs. It is better to work at where the client finds himself at this moment in time. The instructor should watch his step in introducing 'blind' equipment to low vision persons too early, because the client is invariably poorly motivated (this stresses the importance of the evaluation process in mobility). The instructor should also bear in mind the two kinds of vision in the visual system: the what vision (who a person is; what a book says) and the where vision (it tells one where things are, and is used for discovery).

The social pressures on low vision clients (from relatives, friends, workmates, and indeed specialists) are considerable; they may be pushed into blindness. This leads to one of the paradoxes in the field of blindness when compared to low vision: if you're blind, you wind up explaining what you can do, and if you're partially sighted, you outline what you can't do. But beyond this the loss of visual communication becomes hard to tolerate, and the amount of social stress and internal stress can manifest themselves in total preoccupation, so that irritability and fatigue become evident because of the high energy output. Low vision clients are often more easily fatigued than totally blind persons. Not to be overlooked, however, are the effects of drugs and tranquillizers on performance, also allied health conditions besides visual loss. The diabetic, for instance, where it might be better to effect mobility training during early morning or early afternoon.

A question from the floor posed the problem of the client who will not admit to having residual vision. Mr Apple replied that there will always be the hard core of people of this description who will need dealing with. The need for economic security, personal protection, temperamental effectation and the like might make them tell themselves that they should be blind. Also, he might have had the image of blindness thrust upon him, and consequently he has his reputation as a blind person to protect. However, it is not the job of the instructor to confront such individuals: the job is to get the client mobile, and in this respect all one can do is get on with that job, perhaps even using the client's 'sight' to meet these ends, such as the use of visual landmarks during the trainee's unsuspecting moments.

The film CONSIDER ME SEEING was then shown. The film dealt with the school situation where the first indication that a number of children had useable vision was during mobility training. Since therefore such children could obviously benefit from visual stimulation, the school began to develop an environment with an abundance of visual clues so that learning could better take place. Bearing in mind fluctuating types of vision, it seems that many 'blind' children may not realise their full potential without vision stimulation.



The idea at the school is to project a seeing self-image. To further this various preliminary exercises were carried out in the school gym, finding and identifying objects and people. At first the search pattern was poor, and posture too was faulty. However, as the visual performance improved, deportment became more normal, allied with the better search pattern. It was necessary of course to develop a sequential programme of instruction in order to achieve highest results; also, for screening purposes, close co-operation was maintained with the optometrist.

In the schoolroom emphasis was initially on large, cut-out letters for the purposes of spelling and sentence construction; later, to encourage the use of vision, flash cards produced by the New York Lighthouse were used. Care was needed here, for, perhaps to disguise academic under-achievement, some children were hesitant to admit to others their visual ability. However, to improve and maintain seeing ability optical devices were used where practical. Much use was also made of visual aids, particularly closed circuit TV of high magnification (it was felt that children should be proficient in the use of these aids). Motivation for success is of course of great importance in improving visual function, so that the child is increasingly self-satisfied and becomes convinced he can see. To this end visual stimulation activities play a great part, including common object identification and activities to develop spatial relationships. Of the children involved with the visual stimulation programme it was found that out of 45 pupils only two were completely without sight.

The development of perceptual constancy was considered to be important, and exercises were carried out with varied objects, such as geometric shapes (circles, squares, triangles) but of different sizes. The tactual verification of shapes was not of course frowned upon, since combining touch with residual vision helps to reinforce the visual sense. When visual functioning develops, however (bearing in mind that the optimum level of visual functioning might be variable) three-dimensional shapes could be replaced with two-dimensional ones, although some geometric shapes and large letters (X, K, S, Z) proved confusing. For ease and speed of reading the magnified script on closed circuit television was more frequently used as the programme developed.

In one of the few instances where a blindfold could be used beneficially, a child with a degenerating eye condition, this was done so to effect visual memory in remembering such things as the layout of a room. But the punch line of this absorbing film came at the end when one of the children related how she now considered herself "to be seeing it" whether in the schoolroom or out-of-doors.

The video demonstration that followed was concerned with a Low Vision Evaluation Programme for Veterans at Palo Alto, California. Since 70% of students at Palo Alto have residual vision, the importance of such a programme will be appreciated. In this respect it was necessary to determine how much detail the client could perceive and what moving objects could be detected. Room identification and distance perception were evaluated, and the description of geometric patterns. Outdoors the ability to observe moving pedestrians, and to locate bus stops, post boxes, etc. were determined. Variations in kerbs and terrain; ability to ascend and descend stairs; stepping stone detection on lawns - all were taken into account besides a rural evaluation once tested in the urban situation.

Obviously, problem areas to varying degrees of complexity are noted when evaluating a low vision client, therefore the necessity for a thorough spadework in this direction. Firstly, orientation to the rehabilitation centre itself, when the instructor could observe the client's capabilities in respect to indoor mobility. If no real problems were noted, the client could next be orientated to other buildings on the campus, and then to outdoor work. The complexity of various routes would of course be dependent to a great extent on the client's visual ability. But with improved ability routes of higher traffic density, and hazards such as offset kerbs, could be introduced. All the Palo Alto routes were therefore



carefully graded to suit each individual client, and at the same time were progressively used to improve the mobility of low vision clients by constantly seeking to improve the various abilities through increased motivation for seeking to move on to a more difficult journey.

The trainees at Palo Alto are carefully screened by the low vision department who ascertain particularly visual acuity and visual field. For those who will find them beneficial, monoculars are prescribed, which are a convenient aid in the reading of street signs and sign posts, for instance. It may be that some veterans do not need orientation and mobility training, but nevertheless on particularly difficult routes it might be advisable to use a cane, if only as an indication that the user is visually handicapped. Training is also given in the use of traffic surges at lights to determine the opportune time to cross a road. But wherever possible, the trainee is encouraged to concentrate on using his residual vision.

Mrs Apple next spoke on the evaluation and training of functional vision, an assessment being necessary of course to find out what would be an appropriate aid to improve performance. The traditional clinical screening measures visual deficiency, and not what can be done with the remaining vision. After clinical assessment some 10 - 15% of patients are prescribed telescopic aids, but a lack of communication between clinician and mobility specialist does not help towards rehabilitation. The ideal low vision team would be the mobility specialist, eye care specialist, vocational specialist, rehabilitation teacher, social worker and psychologist. The eye care specialist needs to know the functional value of the mobility aid, together with the critical mobility tasks entailed. And the mobility specialist needs to know the value of any remaining vision, bearing in mind light conditions which are so important when eye testing. Eye health condition is crucial when developing a mobility programme. Knowledge of colour discrimination is also necessary. A subjective examination would involve total evaluation, client's literacy, attitudes, role in family, and, finally for what purposes he would like to use his remaining vision for in the future.

Also to be documented would be visual anomalies, such as differences in dark and light areas, photophobia, and the presence of floaters and the like. It is a good idea to ask the client to approximate his visual field by drawing or describing it. The performance assessment would be on the basis of an analysis of tasks over a specific route and the degree of safety and efficiency. The low vision client naturally seeks to avoid physical contact, therefore the number of body contacts (and which part of the body contact was made) should be counted during the assessment route. Also to be noted is the travel space allowed by the client, and the times he accidentally steps off the side kerb or down kerb. Note the kerb waiting time prior to crossing a road, and also test his knowledge of vehicle speeds, and ability to detect moving vehicles, and opportune moments to undertake a road crossing. Note his general efficiency over the route; his walking speed and steps per minute, and the avoidance of wasteful movement from line of travel. The ability to detect and identify landmarks should be noted.

A major aim during mobility should be the maintaining of acceptable levels of stress. Travelling is always accompanied by varying degrees of stress, and the more ability and more information a low vision client has of things about him usually helps in lowering the stress factor. A useful measure of stress is to note the average stride length of the client, a shorter stride usually being equated with a higher stress level. Overall, the performance assessment is based largely on the work carried out by Dr John Armstrong and his colleagues. Of importance is a later re-test, in order to determine the improvement in a client's performance. This of course should be due not to familiarity with a known route, but due to specialist training and the mobility aid being used. For a full evaluation and correct conclusions, obviously procedures and instruments used should be standardised.

For an evaluation of mobility using optical aids, the optical level relevant to the aid being used should be determined, as should the client's ability to use the aid and his subjective response to it. Targets should be set to encourage eye, head and body movement, and the client should be adaptive to changing environment conditions. A poor line of travel, for instance, would indicate weak scanning techniques, or pre-occupation with obstacle avoidance.

Street crossings under varying conditions and light intensities (perhaps using sun-shades in bright light) must be evaluated, together with the identification of landmarks; indeed, the client should be programmed to the use of landmarks. Travel in crowded areas should be noted, and whether or not such journeys are undertaken without confusion and distraction.

Inconsistencies between subjective verbal reports and observable behaviour might be evident, and in any case the client should be exposed to the more challenging situations so that he is acutely aware of self-imposed limitations. This of course will depend very much on the appropriate use of residual vision: when to rely on it solely, and when to introduce the use of a mobility aid. Notwithstanding this no programme should be carried out without the opportunity to conduct a night evaluation, in order to ascertain performance in darkness, and to note, for instance, what use is made of street lights, and reaction to car headlights.

The orientation performance will of course be tested, and the use made of distinctive features, and scanning techniques. Generally speaking a minimum of 20 hours training would be called for when dealing with low vision clients. In these aspects a case for the use of the blindfold could be made. The blindfold permits the low vision client to be trained in the techniques of a totally blind person, and also to be prepared for night travel. The blindfold also permits for variable visual functioning; further, it can prepare for future visual loss, and help the low vision client to concentrate on the use of other senses. This sort of two way lesson also allows the partially sighted client to better appreciate his remaining vision when dealing with mobility. However, there should always be a concrete reason for introducing the use of the blindfold. And cane travel should not be neglected, particularly when night-time mobility is taken into account, and also to illustrate the fact that the user is visually handicapped.

Lesson plans will have four distinct areas: (1) instruction in use of aids, (2) use of night lessons, (3) routes of travel selected for visual content as well as degree of complexity, (4) visibility factors to be taken into account, i.e. brightness level, brightness contrast, size of objects, opportune times for viewing.

Mrs Apple, gearing her remarks mainly in relation to the adventitiously blinded rather than the congenital, stressed the need for purposeful eye, head and body movements to increase the visual field, and not unnaturally, the training programme should be centred on tasks that are meaningful, and at the same time increasing the confidence of low vision clients by encouraging them to make the right decisions when, for example, crossing streets and choosing the appropriate time to do so. Mrs Apple concluded her talk by giving a short resume of various optical aids, stressing that the cosmetic appearance of such aids is invariably important to the user.

The second day of the Conference was mainly devoted to a Low Vision Practicum, involving the use of vision occluded goggles (two foot acuity; tunnel vision; peripheral vision, all being simulated) by delegates whilst negotiating outdoor routes, stairs, and ball throwing activities. The exercise was geared to indicating to delegates the difficulties facing clients with various degrees of visual handicap, and also (since there were both morning and afternoon sessions) to appreciate any improvement in performance from one session to the next, and

to ascertain the main reasons for improvement, if any. Users of the two foot acuity goggles, for instance, observed the great changes in performance that took place when a foggy morning was replaced with a sunny afternoon. At all times, however, there was a need for coaching and protection, so that the subject was not at risk. Kerb detection, even by the more competent travellers, was found to be poor, and the cane was very much needed for this exercise. It was noted also how far hand and eye co-ordination was adversely affected, as indeed was posture. The differences in walking along the shady side and bright side of a road (when shadows presented problems), and in the discernability of movement when road vehicles, for instance, might have a reflective surface (chrome) to emphasise speed. Outlines against a bright skyline were appreciated, and it was concluded that at least a twofold increase in efficiency was evident in bright light when compared to fog.

Summing up the main theme of the Conference, the Chairman emphasised that in our common interest we see the need to seek out the specialist; a specialist who would deal with the concept of blindness in its wider ramifications and adjust his programme and philosophy accordingly, more especially when taking into account what we had heard at Conference, and indeed observed for ourselves during the practicum. It behove us all not to have a pre-conceived idea of the type of person an instructor might be dealing with, but rather, through a programme of analysis, evaluation and observation, an important area of which would be the degree of blindness affecting the client, determine the type of training most likely to succeed with that particular type of person. In short, to deal with the client as an individual and not as a blind person, purely and simply.

After Mr Thornton had extended a vote of thanks to the speakers, there took place a mobility exchange, where various mobility instructors up and down the country put forward a wide range of ideas and suggestions. One speaker put forward a case for orange-banded canes of reflective material; Mr Cave-Browne exhibited the Edinburgh Route Memory Aid; Mr David Dann, Hackney, told of a publicity campaign that had been mounted in that borough and displayed some very effective posters that had been used in conjunction with the campaign; Mr Bob Foster, Ayr, kindly distributed copies of his booklet dealing with procedures for the public when helping a blind person, together with black and white mini-posters on the same theme; Bert Lowe, Sheffield, had available duplicated copies of his 'eight points for bus drivers when visually handicapped passengers are aboard'; David Powell, Hertfordshire, remarked on the availability of snow chains for footwear in bad weather, and also on enlarging sections of maps for more detail, and Henry Shear, Jewish Blind Society, spoke on map making methods for tactual use, and new materials for making these maps. Thus ended a most rewarding Conference and get-together. The NMC deserve congratulating on its success and effective organisation into which, obviously, much hard work had been expended.

(On application to the NMC, together with remittance of 15p. an extended report of the Conference will be made available. Write to: The Principal, National Mobility Centre, 22 Melville Road, Edgbaston, Birmingham 16).

SOUTH AFRICA'S THIRD GUIDE DOG RALLY - (Press clip from INFAMA)

The afternoon of 8th November 1975 was one of the hottest days Johannesburg had experienced during the summer, and the heat certainly taxed the powers of endurance of the 22 guide dog owners (and perhaps even more so their dogs) when they embarked on the third Guide Dog Rally held in South Africa. In covering nearly four kilometres through the heavy traffic of the busy Rosebank suburb of Johannesburg, the competitors had to weave their way through all manner of hazards. While negotiating busy intersections up and down kerbs (not always clearly defined in Johannesburg pavements), which is difficult enough, they also had to contend with the usual inconsiderate public who park cars and

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